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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,347	01/11/2006	Thiemo Arnim Blank	1016710006P	3786

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EXAMINER	
SIMPSON, SARAH A	
ART UNIT	PAPER NUMBER
3731	
MAIL DATE	DELIVERY MODE
09/10/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/507,347	BLANK, THIEMO ARNIM	
	Examiner	Art Unit	
	SARAH A. SIMPSON	3731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 January 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *25-59* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *25-59* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 December 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/17/2008 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 25-30, 32-34, 36, 37, 41, 43, 44, 48, and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable by Fogarty et al. (US 6,123,722) as evidenced by Frantzen (US 5,741,327) in view of Pacetti (US 6,712,844 B2).

Fogarty discloses a stent having a plurality of rings (112) having struts (Figure 12C) and bridge struts on adjacent rings (Figure 12A). There are other embodiments that read on the independent claims (see figure 14 for example). The bridge struts are inter-engaging male/female portions (Figure 12A). The stent is nitinol (Column 19 Line 45).

Fogarty discloses the invention substantially as claimed as stated above. Fogarty does not explicitly disclose a conductivity-reducing layer of at least an order of magnitude lower than the first electrical conductivity layer on an abutment surface of at least one of the complementary mating portions; a portion in which the chemical composition of said metal structure is modified; an oxide layer. However, Frantzen teaches that an oxide layer forms on a nickel titanium stent when the stent is formed (Column 7 Line 61). Therefore, the Fogarty's stent includes a conductivity-reducing layer, but fails to disclose that the layer is at least an order of magnitude lower than the first electrical conductivity.

However, Pacetti teaches an oxide semiconductor layer which may be thought of as an insulator that is substantially less conductive than adjacent conductive portions of the stent may be formed in order to enhance accurate MRI stent imaging (column 7, lines 4-63). Therefore, it would have been obvious to one having ordinary skill in the art

at the time of the invention to modify the stent of Fogarty with a second portion having electrical conductivity at least an order of magnitude lower than the first electrical conductivity. Doing so would enhance MRI stent imaging.

Claims 31, 38-40, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fogarty '722 in view of Pacetti '844 as applied to the claims above, and further in view of Frantzen (US 5,741,327).

Fogarty discloses the invention substantially as claimed as stated above. Fogarty does not explicitly disclose the use of an adhesive with the embodiment shown in figure 12C or the stent being stainless steel or the meander/"S" shape of the rings. Frantzen teaches using an adhesive to connect two bridges (Figs 7-19; Col 7 line 37 – Col 11 line 13) and using stainless steel (Column 1 Lines 52-53) and the shapes of the rings (Figure 1). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Fogarty's bridges to include Frantzen's adhesive and stainless steel and shape. Such a modification would provide a means for securing the bridges and rings to each other. Also, stainless steel is a well-known material for stents and is a known variant to nitinol. The shapes of the rings increase flexibility.

Claims 35 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fogarty '722 in view of Pacetti '844 as applied to the claims above, and further in view of Leonhardt (WO 99/43378).

Fogarty discloses the invention substantially as claimed as stated above. Fogarty does not explicitly disclose the bridge struts comprising a sleeve. Leonhardt teaches the use of a sleeve to secure portions of stents to each other (Page 6 lines 6-9; fig 2D). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Fogarty's bridges to include Leonhardt's sleeve. Such a modification would provide a means to connect the portions of the device securely to each other.

Claims 45-47 and 50-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fogarty '772 in view of Pacetti '844.

Fogarty discloses the invention substantially as claimed as stated above. Fogarty does not explicitly disclose the mounting and laser cutting of the workpiece. However, the Examiner considers it old and well known in the art to mount a tubular structure on a support such as a mandrel, and then to use a laser to cut the pattern of the stent. When a laser is used to create the bridge structure, especially the frusto-conical sections, it would be within the purview of one having ordinary skill to depart the laser from the longitudinal axis. This is necessary to create the desired shape. As suggested in Frantzen, (see above), and in the Applicant's disclosure, the use of a laser is generally sufficient to create an oxide layer that will insulate the bridge struts from each other. Also, it is known in the art to apply oxidizing agents to stents to prevent restonsis (see Hastings et al. US 5,951,458 in relevant prior art). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention

was made to modify Fogarty's method to include the laser cutting technique. Such a modification provides a means for producing the stent with a high degree of accuracy and precision.

Claims 54-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fogarty '772 in view of Pacetti '844 further in view of Kim (US 6,270,524).

Fogarty discloses the invention substantially as claimed as stated above. Fogarty does not explicitly disclose pins for connecting the bridge struts. Kim teaches pins to connect adjacent rings (112). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Fogarty's bridges to include Kim's pins. Such a modification would secure the bridges to each other while allowing some degree of flex.

Fogarty and Kim disclose the invention substantially as claimed as stated above. They do not explicitly disclose the pin being made of electrically insulating material. Pacetti teaches the use of non-conducting materials to connect bridges in order to improve the MRI image of the stent (Column 7 Lines 4-26). Ceramics and oxide layers are known insulating materials and would have been obvious based on Pacetti's teaching. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Fogarty and Kim's pins to include Pacetti's insulating material. Such a modification would improve the MRI of the stent.

Response to Arguments

Applicant's arguments with respect to claims 25-59 have been considered but are moot in view of the new ground(s) of rejection.

In response to applicant's argument that Frantzen fails to disclose a difference in thickness of oxide layers and thus does not distinguish the electrical conductivity of one portion of the stent with another, it is noted that the features upon which applicant relies (i.e., the difference in thickness of the oxide layers) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SARAH A. SIMPSON whose telephone number is 571-270-3865. The examiner can normally be reached on Monday - Friday 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Todd Manahan can be reached on 571-272-4713. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sarah A Simpson/
Examiner, Art Unit 3731

/Todd E Manahan/
Supervisory Patent Examiner, Art Unit 3731